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AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A magnetic material manufacturing method for manufacturing a ribbon-shaped magnetic material comprising:

colliding a molten alloy to a circumferential surface of a cooling roll so as to cool and then solidify the molten alloy, wherein the ribbon-shaped magnetic material has an alloy composition represented by the formula of $R_x(Fe_{1-y}Co_y)_{100-x-z}B_z$ (where R is at least one rare earth element, x is 10-15 at%, y is 0-0.30 and z is 4-10 at %);

dividing dimples that are produced on a roll contact surface of the ribbon-shaped magnetic material which is in contact with the circumferential surface of the cooling roll with dimple correcting means, the dimple correcting means defined by a plurality of ridges that are formed by grooves formed in the circumferential surface of the cooling roll at an angle less than or equal to 30° relative to an edge of the cooling roll, wherein an average width of each groove is 0.5-90 μm for preventing the molten alloy from entering the grooves and, each ridge including a plurality of discontinuous, discreet, and spaced apart regions, wherein the ratio of the area of the grooves with respect to the area of the circumferential surface when they are projected on the same plane is in the range of 30 – 99.5%.

2. (Original) The manufacturing method as claimed in Claim 1, wherein the cooling roll includes a roll base and an outer surface layer provided on an outer peripheral portion of the roll base, and the outer surface layer has said dimple correcting means.

3. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity lower than the heat conductivity of the structural material of the roll base at room temperature.

4. (Original) The manufacturing method as claimed in Claim 2, wherein the outer surface layer of the cooling roll is formed of a ceramic.

5. (Previously Presented) The manufacturing method as claimed in Claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity equal to or less than 80 $Wm^{-1}K^{-1}$ at room temperature.

6. (Previously Presented) The manufacturing method as claimed in Claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a coefficient of thermal expansion in the range of 3.5 – 18 [$x10^{-6}K^{-1}$] at room temperature.

7. (Original) The manufacturing method as claimed in Claim 2, wherein an average thickness of the outer surface layer of the cooling roll is 0.5 to 50 μm.

8. (Original) The manufacturing method as claimed in Claim 2, wherein the outer surface layer of the cooling roll is manufactured without experiencing a machining process.

9. (Cancelled)

10. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the average width of the ridge is 0.5-90 μm.

11. (Cancelled)

12. (Cancelled)

13. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the average height of the ridge or the average depth of the groove is 0.5-20 μm.

14. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the ridge or groove is formed spirally with respect to the rotation axis of the cooling roll.

15. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the at least one ridge or groove includes a plurality of ridges or grooves which are arranged in parallel with each other through an average pitch of 0.5-100 μm.

16. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein the ratio of the projected area of the ridge or groove with respect to the projected area of the circumferential surface is equal to or greater than 10%.

17. (Original) The manufacturing method as claimed in Claim 1, wherein the method includes a step for milling the ribbon-shaped magnetic material.

18.-31. (Cancelled)

32. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein a cross-section of the grooves is square-shaped.

33. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein a cross-section of the grooves is triangle-shaped.

34. (Previously Presented) The manufacturing method as claimed in Claim 1, wherein a cross-section of the grooves is round-shaped.

35. (Previously Presented) A magnetic material manufacturing method for manufacturing a ribbon-shaped magnetic material comprising:

colliding a molten alloy to a circumferential surface of a cooling roll so as to cool and then solidify the molten alloy, wherein the ribbon-shaped magnetic material has an alloy composition represented by the formula of $R_x(Fe_{1-y}Co_y)_{100-x-z}B_z$ (where R is at least one rare earth element, x is 10-15 at%, y is 0-0.30 and z is 4-10 at %); and

dividing dimples that are produced on a roll contact surface of the ribbon-shaped magnetic material which is in contact with the circumferential surface of the cooling roll with dimple correcting means, the dimple correcting means defined by a plurality of ridges provided on a circumferential surface of the cooling roll for dividing dimples that are produced on a roll contact surface of the cooling roll;

wherein the plurality of ridges are provided by forming at least two spiral grooves of which a direction of each spiral groove is different so that the grooves intersect on the circumferential surface of the cooling roll, the grooves having an average width of 0.5 – 90 μm to prevent a molten alloy of the magnetic material from entering the groove; and

a ratio of an area of the grooves with respect to an area of the circumferential surface when they are projected on the same plane is in the range of 30 – 99.5%.

36. (Previously Presented) The magnetic material manufacturing method of Claim 35, wherein each spiral groove has angle relative to an edge of the cooling roll that is less than or equal to 30°; and

the angle of each spiral groove is different.

37. (Previously Presented) The magnetic material manufacturing method of Claim 35, wherein a cross-section of the grooves is square-shaped.

38. (Previously Presented) The magnetic material manufacturing method of Claim 35, wherein a cross-section of the grooves is triangle-shaped.

39. (Previously Presented) The magnetic material manufacturing method of Claim 35, wherein a cross-section of the grooves is round-shaped.